

## ABSTRACT

Chalcogenide nanowires and other micro-and nano scale structures are grown on a preselected portion of on a substrate. They are amorphous and of uniform composition and can be grown by a sublimation-condensation process onto the surface of an amorphous substrate. Among other uses, these structures can be used as coatings on optical fibers, as coatings on implants, as whispering galleries, in electrochemical devices, and in nanolasers.